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# Index to FAA Office of Aerospace Medicine Reports: 1961 Through 2004

## *INTRODUCTION*

William E. Collins  
Michael E. Wayda  
Katherine Wade

Civil Aerospace Medical Institute  
Federal Aviation Administration  
Oklahoma City, OK 73125

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## Foreword

# INDEX TO FAA OFFICE OF AEROSPACE MEDICINE REPORTS: 1961 THROUGH 2004



*Staff members (many of whom have authored technical reports) gathered in front of the CAMI Building in October 2002 to observe the 40th anniversary of the building's opening on October 21, 1962.*

**T**he Civil Aerospace Medical Institute, CAMI, is the medical certification, research, education, and occupational health wing of the Federal Aviation Administration's Office of Aerospace Medicine (OAM).

The Institute's mission has not changed over the years: Our only purpose is to further aviation safety.

At CAMI, we study the factors that influence human performance in the aviation environment, find ways to understand them, and communicate that understanding to the aviation community.

Communicating research findings to the public is achieved in several ways: published reports in professional journals and newsletters, proceedings reports, and formal technical reports.

*OAM Reports* is the major part of the communications effort. Published continuously since 1961, these reports are the distillation of FAA aeromedical research efforts in aviation safety.

Through 2004, we have published 997 reports on a wide range of subjects, from *Angular Acceleration* to *Workload Effects on Complex Performance*.

The Index is provided as a reference for those engaged in aviation medicine and related disciplines. We do so because sharing significant findings contributes to the body of aeromedical knowledge through the synergistic effects of others, leading to understanding and the application of appropriate solutions.

## Historical Vignette

### A 1960 PRELUDE TO NEW FAA MEDICAL LEADERSHIP AT WASHINGTON HEADQUARTERS AND CAMI: SOME PERSONAL RECOLLECTIONS

By Stanley R. Mohler, M.D.

#### Preludes

General Dwight D. Eisenhower was elected the 34<sup>th</sup> President of the United States in November 1956. On August 23, 1958, he signed the Federal Aviation Act that included the creation of the Federal Aviation Agency (FAA). On November 1, 1958, he selected Elwood "Pete" Quesada, Lt. Gen. USAF (Ret.) to become the first Administrator of the newly established Federal Aviation Agency. General Quesada arranged for James L. Goddard, M.D., a career U.S. Public Health Service officer, to become on July 12, 1959, the FAA's initial Civil Air Surgeon (Holbrook, 1974), a new title for the enhanced top FAA medical position that was elevated to report directly to the Administrator (who reported to the President).

In collaboration with William F. Ashe, M.D., Chair of the Department of Preventive Medicine, Ohio State University School of Medicine, Dr. Goddard convened on September 15, 1960, his first FAA formal assemblage of aviation medical examiners (AMEs). This was in conjunction with the 7<sup>th</sup> Annual Postgraduate Course in Aviation Medicine that Dr. Ashe had been conducting for several years. A group of selected interested physicians and aviation professionals comprised speakers for this prototypical AME seminar, held in the fall of 1960, that has grown to become today's outstanding seminar presentations by the Civil Aerospace Medical Institute (CAMI). At the conclusion of the course, Dr. Goddard announced that he intended to initiate FAA seminars of this type for AMEs before the end of the year. And he did so. Mr. James L. Harris organized the first one in December of 1960. CAMI AME seminars are now provided nationally and internationally and continue to achieve Dr. Goddard's objective to upgrade the aviation medical certification practice of AMEs.

Those attending the historic 1960 gathering included the following:

- Charles I. Barron, M.D., Medical Director of the Lockheed Aircraft Company, speaker
- George P. Kidera, M.D., Medical Director, United Airlines, speaker
- Peter V. Siegel, M.D., Smithton, Missouri, AME

- Stanley R. Mohler, M.D., Medical Officer, Center for Aging Research, NIH, speaker
- Philip B. Phillips, M.D., Psychiatrist, U.S. Navy, speaker
- Richard G. Snyder, Ph.D., Crash Injury Researcher, Phoenix, Arizona, speaker
- Ralph F. Nelson, Aircraft Owners and Pilots Association, Bethesda, Maryland, speaker
- Duane A. Catterson, M.D., Student/resident, aerospace medicine, OSU
- Charles E. Billings, M.D., Student/resident, aerospace medicine, OSU
- Richard L. Wick, M.D., Student/resident, aerospace medicine, OSU
- Luis A. Amezcua, M.D., International AME
- Bert D. Dinman, M.D., Occupational medicine facility, OSU

In addition to Dr. Goddard, other attending FAA medical personnel included:

- William R. Albers, M.D., Assistant Eastern Region Flight Surgeon, New York
- James L. Harris, M.D., tasked to organize the first AME seminar, Washington, DC
- John E. Smith, M.D., Chief, FAA Research Requirements Division, Washington, DC
- Arthur E. Wentz, M.D., Head, FAA Georgetown Clinical Research Branch, Washington, DC
- Carl E. Wilbur, M.D., USN, Assigned to FAA, Accident Investigation, Washington, DC

#### Developments

By the summer of 1961, Dr. Goddard had asked Dr. Siegel to join the Headquarters Certification Division and Dr. Mohler to become the Director of the emerging Civil Aeromedical Research Institute (CARI) at the FAA Aeronautical Center, Will Rogers Airport, Oklahoma City, Oklahoma. Both accepted. In 1962, Dr. Goddard moved the Headquarters Certification Division plus the Standards Division to facilities in the new Institute. Dr. Albers was asked to be the new Standards Division Chief and he quickly accepted. Dr. Siegel was asked to be the



Participants in Dr. Ashe's 7<sup>th</sup> Annual Postgraduate Course in Aviation Medicine, Ohio State University, 1960.

1. Dr. Mohler, 2. Dr. Siegel, 3. Dr. Dinman, 4. Dr. Smith, 5. Mr. Nelson, 6. Dr. Amezcua, 7. Dr. Goddard, 8. Dr. Kidera,
9. Dr. Ashe, 10. Dr. Catterson, 11. Dr. Wick, 12. Dr. Billings, 13. Dr. Barron, 14. Dr. Wentz, 15. Dr. Albers, 16. Mr. Harris,
17. Dr. Snyder, 18. Dr. Phillips, 19. Dr. Wilbur. Others are primarily AMEs.

Chief of the Certification Division and he accepted. Mr. Harris transitioned to the Institute to manage aviation medical examiner and airman education programs.

The Research Requirements Division remained in Washington, DC. When Dr. Smith retired, Dr. Mohler was appointed to head the Washington-located Division, giving him both an Oklahoma base and a Washington Headquarters base. He could write a memo to Washington as CARI head and send himself an answer as Washington Division head. This was a very efficient arrangement. Support for a soon-to-be-famous and widely quoted decompression study (Barron and Cook, 1965) by Dr. Charles Barron of Lockheed (Barron and Mohler had become acquainted at the 1960 OSU meeting) was requested by “the CARI Dr. Mohler” and subsequently approved by “the Division Chief Dr. Mohler.”

Drs. Albers, Siegel, and Mohler obtained homes in Norman, Oklahoma, and often rode back and forth to the Institute together, providing useful opportunities for program coordination. Their “triad” formed an interlocking, synergistic, and functional exchange mechanism that benefited their periodic briefings for national and international aviation executives. A new FAA “National Aviation System Course,” monthly five-day seminars for aviation industry executives, and engineering and operational professionals (including airline pilots), was introduced in 1963 by General Quesada’s successor, Mr. Najeeb E. Halaby. The course made heavy use of the three physicians for several years as regular presenters. A guided tour through the Institute was a highlight for the “student” visitors and gave the three medical programs considerable visibility throughout the aviation industry.

The Aviation Medical Service programs became increasingly known and consulted. Dr. Siegel oversaw the computerization of the FAA medical records certification process for airmen. He moved the Class One airman ECG reception point address from Georgetown University to his Division in Oklahoma where the responsibility for assessment and action lay. Dr. Albers, with Charles R. Harper, M.D., made the first definitive study of the number of fatal alcohol-associated general aviation accidents. Dr. Mohler assisted the researchers to expeditiously prepare, communicate, and publish their aeromedical safety findings for use by the aviation community, including manufacturers, airmen, and FAA flight standards and air traffic personnel.

In September 1965, Dr. Siegel was asked by the new FAA Administrator, General William F. McKee, USAF, to be the Federal Air Surgeon (the position that was originally entitled Civil Air Surgeon). Dr. Siegel asked



Replica of a certificate, signed by Drs. Ashe and Goddard, documenting participation in the 7<sup>th</sup> Annual Postgraduate Course in Aviation Medicine, 1960.

Dr. Mohler to accompany him to headquarters as Chief of the new Aeromedical Applications Division (research planning branch, accident investigation branch, and bioengineering branch). Both moved to Washington. Dr. Albers was now with United Airlines, Washington, DC, and subsequently became Medical Director of the Atomic Energy Commission.

In order to consolidate and more efficiently conduct the FAA medical research, Dr. Mohler suggested, Dr. Siegel concurred, and General McKee agreed, that the FAA Georgetown clinical research activity (set up to study pilot aging) be amalgamated with the now Civil Aeromedical Institute (CAMI) in Oklahoma City. The move was facilitated by a Government Accounting Office (GAO) report suggesting that similar research was being accomplished at the Lovelace Foundation, Albuquerque, New Mexico. Some of the Georgetown resources were applied to construct a large-scale emergency evacuation research facility adjacent to CAMI (Mohler, Hays, and Collins, 2001). Longitudinal pilot aging studies at the Lovelace Foundation continued to provide the FAA with data on the topic after the FAA Georgetown activity ended. While at the Center for Aging Research, National Institutes of Health (NIH), prior to joining the FAA, Dr. Mohler had assisted Lovelace scientists to obtain large-scale support to study airline pilot aging. In fact, the invitation by Dr. Goddard to Dr. Mohler to attend the 1960 OSU seminar was for the latter to give a presentation on the latest developments from the NIH perspective in the field of research in aging (Mohler, 1961).



Dr. Siegel retired from the FAA in 1976. Dr. Mohler retired in 1978, becoming Professor and Director of the new Aerospace Medicine Residency Program being established by National Aeronautics and Space Administration (NASA) at the new School of Medicine, Wright State University, Dayton, Ohio. With the departure of its key faculty, Ohio State University had just closed out its aerospace medicine residency program.

### CARI/CAMI

With regard to CARI, in October 1965, just prior to Dr. Mohler's December move to Washington, DC, Administrator McKee gave the Aeronautical Center Director, Mr. W. Lloyd Lane, managerial authority over all Center activities. As part of the general reorganization of the Aeronautical Center, CARI, the Medical Certification Division, and an Aeromedical Services Branch that included a medical clinic were combined into one new division and CARI became CAMI – the Civil Aeromedical Institute. Succeeding Dr. Mohler was J.R. Dille, M.D., who had served as Program Advisory Officer to Dr. Mohler from 1961-1964 before spending a year as Regional Flight Surgeon, Western Region, Los Angeles, California. Dr. Dille directed CAMI from December 1965 until his retirement in December 1987. He was succeeded by William E. Collins, Ph.D., a psychologist who had been jointly selected in December 1965 by Dr. Mohler, Dr. Dille, and Mr. Lane to head CAMI's Aviation Psychology Laboratory. Dr. Collins was acting CAMI Director during 1988 and served as Director from 1989 until his retirement in 2001. Melchor J. Antuñano, M.D., who had been hired by Dr. Collins in 1992 to head the Aeromedical Education Division, was appointed the new Director of CAMI in 2001.

In the continuation of historical linkages, Dr. Antuñano was a former aerospace medicine resident with Dr. Mohler at Wright State University, graduating in 1987. Dr. Antuñano, a native of Mexico, had been recommended to Dr. Mohler for the residency program by none other than Dr. Luis Amezcua, who had risen to the top in Mexico's civil aviation medicine programs. It will be recalled that at the 1960 meeting at Ohio State University, Dr. Mohler and Dr. Amezcua had become acquainted and evolved a lasting professional friendship! Dr. Amezcua's recommendation of Dr. Antuñano thus received a high weighting, a fully justified decision as subsequent events have so well demonstrated.

### After Word

In late 2001, CAMI was given "commercial space flight" responsibilities and enters the 21<sup>st</sup> century with the same acronym but an updated name: the Civil Aerospace Medical Institute. Under Dr. Antuñano's guidance, the personnel at the Institute are looking forward to the completion of a large-scale renovation of the Institute building, currently in progress, as they continue their national and international aerospace medical and human factors research, medical certification, aeromedical education, and medical standards safety work and contributions.

### References

- Barron, C. and Cook, T. (1965). Effects of variable decompressions to 45,000 feet. *Aerospace Medicine*, 36(5): 425-430.
- Holbrook, H.A. *Civil Aviation Medicine in the Bureau-cracy*. Banner Publishing Company, Inc. Bethesda, MD. 1974. pp 1-347.
- Mohler, S.R. (1961). Aging and pilot performance – current related research and research needs. *Geriatrics*, 16(2):82-88.
- Mohler, S.R., Hayes, K.A., and Collins, W.E. Some historical observations of CARI/CAMI: 1960-1984. In Collins, W.E. and Wayda, M.E. *Index of Office of Aviation Medicine Reports: 1961 through 2000*. FAA Civil Aeromedical Institute. DOT/FAA/AM-01-1. pp iii-vii.

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*Dr. Stanley R. Mohler is Professor Emeritus of Aerospace Medicine at Wright State University, Dayton, Ohio.*

## HOW TO USE THE INDEX

The Index is organized in three sections:

1. Chronological Index: A cumulative list of all research reports from 1961 through 2004.
2. Author Index: All contributing authors, in alphabetical order.
3. Subject Index: Subjects, listed in alphabetical order.

Some examples are:

04-8 Broach D: Methodological issues in the study of airplane accident rates by pilot age: Effects of accident and pilot inclusion criteria and analytic strategy.

**Above:** This is an entry from the *Chronological Index* of research reports, shown in cumulative sequence.

DeWeese R 92-20, 93-14, 94-19, 95-30, 98-11, 02-11, 03-9, 04-18

**Above:** This is an entry from the *Author Index*, which lists all of the research reports prepared by an author or co-author.

Age  
...age 60 rule, 94-20, 94-21, 94-22, 94-23, 04-8  
...air traffic controller health, 65-6, 71-8, 71-19, 72-20

**Above:** An example of entries in the *Subject Index*; refers to all reports that pertain to a specific topic.

## REPORT NUMBERS

04-9 Nakagawara VB, Montgomery RW, Dillard AE, McLin L, Connor CW: The effects of laser illumination on operational and visual performance of pilots during final approach. ADA425392

**Above:** The first numbers (04-9) refer to the year and chronological number of the report. This is an abbreviated portion of the official number given each report and is found in the upper left of the report's cover page. The full report number of "04-9" is DOT/FAA/AM-04/9. The "ADA425392" is appended to the report by the National Technical Information Service. Keep the number system in mind when ordering from NTIS.

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